



SPECIFICATION

TITLE OF THE INVENTION

METHOD FOR SUBSCRIBER ADMINISTRATION IN A VARIETY OF
TELECOMMUNICATIONS NETWORKS, AND TELECOMMUNICATIONS

5 SYSTEMS FOR CARRYING OUT THE METHOD

BACKGROUND OF THE INVENTION

7027447-080701
The present invention relates to a method for subscriber administration in a variety of telecommunications networks, in which first service features and other features are made available to a first subscriber to a line-switching communications network using the line-switching communications network. Second service features and other features are made available to a second subscriber to a packet-switching communications network using the packet-switching communications network. Service features and other features can be set at the first subscriber using a first control unit of the line-switching communications network. Service features and other features can be set at the second subscriber using a second control unit of the packet-switching communications network.

There are various types of communications networks for transmitting voice, video data and further data. Different services and features have been developed for each of these communications networks by virtue of the various ways in which these communications networks can be used. Conventional communications networks for the transmission of voice are generally line-switching communications networks and communications networks for transmitting other data are usually packet-switching communications networks; for example, a local computer network (Local Area Network; LAN) or the Internet. However, at present voice, data and video services of both types of communication network can be made available. It is therefore possible, for example, to connect a subscriber to the line-switching communications network via a packet-switching communications network. Supplementary services such as call pick-up, three-way conferencing, large-scale conferencing, holding, displaying of toll information, closed user group, call number identification, automatic call-back when busy, automatic call-back when no

reply, call barring, call waiting and call forwarding which are made available in known line-switching communications networks also can to a certain extent, be used in packet-switching communications networks. Standards, for example in the series of the Recommendations of the International Telecommunication Union

5 Telecommunications Standardisation Sector (ITU-T Recommendation) based on the H.323, are defined for packet-switching communications networks. These standards include, in particular, the Standards H.323, H.225 and H.450.

An H.323 architecture for supplementary services in which there is a possibility of interaction of the services between line-switching and packet-switching communications networks is also known. For example, it is known that

10 user-channel-related signaling messages for activating, deactivating, requesting and controlling services and features in the line-switching communications network are mapped onto signaling packets which are used in the packet-switching communications network. Preferably, "DSS1 messages" which are defined in the

15 ITU Standards Q.931 and Q.932 are used in the line-switching communications network. Preferably, the standardized H.225 signaling protocol is used for transmitting the signaling packets in the packet-switching communications network, in particular over the Internet. Service features and features which, to be used, require user-channel-related signaling messages are, for example, call pick-up,

20 three-way conferencing and large-scale conferencing, holding, displaying of toll information, closed user group and call number identification services. Signaling which is independent of a user connection or a user channel is necessary for status interrogations and for activating or deactivating service features; for example, call divert, automatic call-back when busy, automatic call-back when no reply and call

25 waiting.

Components such as terminals, gateways and gatekeepers are provided and defined for transmitting voice according to the H.323 Standard. Terminals are terminating devices which are connected to the packet-switching communications network. In packet-switching communications networks it is necessary for the

30 subscriber to log on with his terminal. A gateway is used as an interface for

converting the data protocols between the packet-switching communications network and the line-switching communications network. A gatekeeper is used to administer and to check user services and network capacities of a packet-switching communications network according to the H.323 Standard. The addressing of an incoming call also takes place in the gatekeeper in the packet-switching communications network. Each subscriber has an address in the packet-switching communications network. The telephone number which is selected by a calling subscriber is converted by the gatekeeper to the address of the subscriber in the packet-switching communications network. In this way, the H.323 Standard can be used to transmit telephone calls over the Internet and in networks based on an Internet protocol.

Large packet-switching communications networks enable a number of employees to avoid the need to work in the same office, or to work in the same office continuously. This is the case, in particular, if employees have to travel often or work as teleworkers at home. These employees are then connected to an external data network; for example, the Internet. This Internet then provides these employees with access to the internal data network of the company, for example an Intranet and to the voice network of the company. Employees who are working, for example, for a department or on a project, are combined into groups, "CENTREX" groups, in particular for the sake of better accessibility. CENTREX is a special service which is made available using a network node or using a number of network nodes of a telecommunications network. CENTREX can be used to provide some of the connected subscribers, for example the employees of the department or of the project, with a range of functions corresponding approximately to the range of functions of a private branch exchange, even though they are not connected to a private branch exchange. Using the CENTREX service it is possible, for example, for an incoming call for one employee in the group to be made visible and available to other preset subscribers. Thus, with the CENTREX service there is also the possibility of presetting a team call or a call pick-up. Here, when there is an incoming call to a subscriber line in the group a message is generated which is